1. In the below elements which of them are values or an expression? eg:- values can be integer or string and expressions will be mathematical operators.

\* - Expression

'hello' - String value

-87.8 - Integer value

- - Expression

/ - Expression

6 - Integer value

2. What is the difference between string and variable?

ans.

String - Sting is a data type to store the sequence of characters. Strings are immutable. This means that once defined, they cannot be changed.

Variable- Variables are nothing but reserved memory locations to store values.

3. Describe three different data types.

a. Integers- Integer literals are created by any number without a decimal or complex component.

b. Float - Float literals can be created by adding a decimal component to a number.

c. Complex- Complex literals can be created by using the notation x + yj where x is the real component and y is the imaginary component.

4. What is an expression made up of? What do all expressions do?

An expression is a combination of values, variables, operators, and calls to functions. Expressions need to be evaluated.

5. This assignment statements, like spam = 10. What is the difference between an expression and a statement?

ans- Statements represent an action or command e.g print statements, assignment statements. Expression is a combination of variables, operations and values that yields a result value.

6. After running the following code, what does the variable bacon contain?

bacon = 22

bacon + 1

ans - 23

7. What should the values of the following two terms be?

'spam' + 'spamspam' = 'spamspamspam'

'spam' \* 3 = 'spamspamspam'

8. Why is eggs a valid variable name while 100 is invalid?

ans- Variable name can contain both letters and digits, but they have to begin with a letter or an underscore, that is why eggs is a variable and 100 is not a variable.

9. What three functions can be used to get the integer, floating-point number, or string version of a value?

ans Integer - int(), floatig point number- float(), String version-str()

10. Why does this expression cause an error? How can you fix it?

'I have eaten ' + 99 + ' burritos.'

ans - we can only concatenate str (not "int") to str. and here 99 is a integer value.

fix is 'I have eaten ' + '99' + ' burritos.' that means keep 99 as a string.